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AUTHOR Alpert, Cathy L.; Rogers-Warren, Ann
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ABSTRACT

The effectiveness of training mothers to use four incidental language teaching procedures with their language-delayed preschoolers was evaluated. Six mothers were trained to use the following techniques: first, the Model Procedure, which provides the response for the child to imitate; second, the Mand-Model Procedure, which elicits information the child already knows; third, the Time Delay Procedure, which allows the child time to initiate communication; and finally the Incidental Teaching Procedure, which uses the three previously trained techniques in a new situation. Training of each technique consisted of a lecture, a videotape, a handout, and homebased sessions featuring trainer feedback and audiotaped play sessions. Results indicated mothers successfully acquired the skills but that maintenance and generalization of the skills may need to be specifically programmed. (Detailed data on one mother are provided). (JW)

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Mothers as Incidental Language Trainers of Their Language-Disordered Children

Cathy L. Alpert and Ann Rogers-Warren
Vanderbilt University

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There is general consensus among speech pathologists, parent trainers, and language interventionists that parent language intervention is critical in improving generalized language skills of handicapped children. Far less agreement exists, however, concerning cost-efficient and effective methods for training parents, the content of the training, and procedures for quantifying changes in parent and child behavior.

A number of studies have examined the effects on child language of various training strategies as applied by parents. MacDonald, Blott, Gordon, Spiegel, and Hartmann (1974) studied the effects of training parents to teach their Down's Syndrome children to use eight semantic-grammatical rules in imitation, conversational, and play activities. Goldstein and Lanyon (1971) trained the parents of a language-impaired child to use a modeling-reinforcement paradigm to build imitation, and a question-prompt-reinforcement paradigm to establish labeling. In her work with autistic children, Howlin (1981) taught parents to prompt and reinforce socialized, communicative speech and to correct inappropriate or echolalic utterances. Similarly, Nordquist and Wahler (1973) trained parents to use prompting, shaping, fading, and reinforcement procedures to establish verbal imitation skills in their four-year-old nonverbal autistic child.

While each of the above studies provided data on child behaviors to substantiate the improvements in communication following treatment, only one of them also

included data on parental application of the language intervention techniques. Because specific data documenting the parents' behavior are lacking, it is not clear if the parents actually applied the techniques as trained by the experimenter, and hence, if use of the intervention techniques as designed by the experimenter led to the observed changes in the children's behavior.

In addition to the problem of failure to obtain data on parent-application of the language intervention procedures, most of these studies did not delineate the steps in the procedures well enough to permit replication of the training by others. Furthermore, data on generalization and maintenance were often lacking such that it is unclear if the parents could generalize use of the techniques across settings, situations, stimulus materials, and changing language skills of the child, or if the parents maintained their ability to apply the techniques once formal training was discontinued.

The remainder of this presentation will focus on a study by Ann Rogers-Warren and myself in which mothers were trained to use four incidental teaching procedures to improve the communication skills of their language-delayed preschoolers. The problems mentioned previously were taken into account in planning this study. In particular, steps were taken to systematize the training procedures so that they could be easily replicated and so

that data could be collected on mothers' rate and correct use of the techniques. Successful parent training was considered to be dependent upon mothers' correct use of the techniques in naturally-occurring everyday situations. Therefore, generalization data were collected in three situations that differed in at least one important respect from the training situation. Finally, to determine whether or not mothers continued to use the techniques once formal training sessions were completed, maintenance data were obtained one, two, and three months following the end of training.

The four techniques that the mothers were trained to use were arrived at following a review of existing studies in which parents were trained as language interventionists, and studies in which teachers had been trained to use incidental teaching techniques to improve the communication skills of their language-handicapped students. The procedures selected were: (1) the Model Procedure; This procedure utilized a model-corrective model-reinforcement paradigm similar to that utilized in some of the studies previously mentioned; (2) the Mand-Model Procedure, described and studied by Rogers-Warren and Warren (1980); (3) Time Delay, which had been examined in two studies by Halle and his colleagues (Halle, Baer, & Spradlin, 1981; Halle, Marshall, & Spradlin, 1979); and (4) Incidental Teaching, which had been developed and empirically validated in several studies by Hart and Risley (1968;1974;1975;1980).

In a multiple-baseline design acorss dyads, six

mothers were taught to use these four incidental teaching techniques. The purpose of the study was to evaluate mothers' abilities to correctly apply the techniques and also to assess the effects of the techniques on child language.

Before training mothers to use the procedures, they were trained to arrange the environment to facilitate talking by their children. This sequence of training was followed because the mother's ability to arrange and control materials in the environment is critical to her ability to effectively apply the procedures. During training in environmental arrangement, mothers learned to program for successful teaching interactions by selecting activities that were appropriate for the child's interests and skill level. Mothers were also trained to increase requesting behavior by the child by arranging materials in the environment so that they were visible to the child but out of his or her reach, and by adjusting materials such that the child would need to request help to open them, attain them, work them, and so on. Mothers also learned to control materials so that only those items being used at the moment were available to the child. Other materials were removed so that they wouldn't distract the child from the task at hand. Finally, mothers were taught to withhold parts of materials from the child while eliciting language, and then to immediately give the material to the child contingent upon language responses.

The techniques were trained in the order specified above for two reasons. First, the child-goals of each technique facilitated teaching the child-goals of the next-trained technique. Second, the steps of each procedure are cumulative. For example, learning the steps in the Model Procedure would facilitate learning the slightly more complex steps in the Mand-Model Procedure.

The Model Procedure is the simplest of the four techniques, and the other techniques build upon it. The desision to train mothers to use the Model Procedure was based on the underlying theme of using the techniques to program for success by the child. Use of open-ended mands such as "What are you building?" or "What is it called?", will probably result in failure for children with limited expressive vocabularies. The Model Procedure programs for success by providing the response for the child to imitate. If, after two models, the child does not give the correct response, corrective feedback is given and the interaction continues. In order to prevent teaching interactions from being aversive to the child, the Model Procedure, like the other procedures, is designed to be brief and positive in nature.

The primary child-goals of the Model Procedure are: (1) to establish a basic vocabulary; (2) to train generalized imitation; and (3) to train a strategy for incidental learning of vocabulary. Other child-goals of the Model Procedure, as well as the remaining three procedures, are establishing joint attention as a cue for verbalization and training turntaking skills.

The second procedure, the Mand-Model Procedure, is used to elicit information which the child already knows or is likely to know. If, after one or two mands, the child has not given the appropriate response, the adult goes into the Model Procedure and presents the response for the child to imitate. Verbal praise plus an expansion of the child's response follow correct responses. Corrective feedback follows incorrect responses. The major child-goals of the Mand-Model Procedure are: (1) to train responding to a variety of adult-presented verbal cues, and (2) to train the child to provide, upon request, information he or she already knows.

The third procedure, the Delay Procedure, is used to train the parent to allow the child time to initiate communication about needs, wants, or environmental stimuli. Thus, unlike the Model and Mand-Model Procedures, in which the adult verbally elicits language from the child, the Delay Procedure teaches the adult to refrain from talking in order to afford the child an opportunity to initiate an interaction.

Implementation of the Delay Procedure begins with one or two delays by the adult. The delays serve as a cue for the child to verbalize. If the appropriate response does not follow a delay, the adult has the option of going directly into the Model or Mand-Model Procedure as a means of eliciting the target response.

In terms of child-goals, the Delay Procedure is primarily used to train the child to initiate verbal inter-

actions about environmental stimuli.

The Incidental Teaching Procedure is trained last. This procedure simply requires using the three previously trained procedures in a new situation. Whenever the child initiates a request or a command (and in so-doing, specifies a reinforcer), the adult elicits more complex or elaborated language from the child by following up the request/command with either the Model, Mand-Model, or Delay Procedure.

The child-goals of the Incidental Teaching Procedure are: (1) to build requesting behavior; (2) to train elaborated language about particular topics; and (3) to increase the length of conversation about particular topics.

Training of each technique occurred in the clinic and consisted of: a lecture explaining the technique; a videotape showing the trainer using the technique individually with three children (one of whom was the parent trainee's child); and a written handout describing highlights of the target technique. Each home-based training session began with the trainer presenting descriptive and graphic feedback on the mother's use of the techniques during the previous session. The mother then practiced using the trained techniques in a 10-minute audiotaped play session with her child. After 10 minutes of play, the mother was given specific feedback on her application of the procedures. An additional five minutes of audiotaped practice followed the break for feedback.

The techniques were trained one-at-a-time. After a new technique was trained, mothers were asked to practice

using it, and to continue using the previously-trained techniques.

In addition to using the procedures during the training sessions, mothers were asked to apply the techniques incidentally throughout the day whenever opportunities arose to work on their child's language.

In the training, generalization, and maintenance sessions, data were collected on mothers' rate and percentage of correct use of the techniques. Data on changes in child responsiveness, intelligibility, rate and linguistic complexity were also collected, though these data have not been fully analyzed. Due to time constraints, I will now present data from one mother. The trends of this mother's data are similar to those of the other mothers in the study.

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Insert Figures 1-5 about here

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In sum, there is empirical evidence to suggest that like trained teachers, parents can also be trained to use incidental language teaching strategies with young language-delayed children. There are also data indicating that mothers are likely to generalize their use of the techniques to other, non-training situations. A comparison of maintenance data of mothers who did and did not continue to record weekly 10-minute practice sessions indicated superior maintenance by those mothers who recorded the sessions and turned in the tapes to the experimenter. This suggests

that maintenance, like generalization, may need to be specifically programmed. Finally, while data on the complexity of child responses have not been fully analyzed for all six children, it appears that as a result of parents' use of incidental teaching strategies, improvements may be seen in the rate, complexity, intelligibility, and functional use of language by the children.

References

Goldstein, S.B., & Lanyon, R.I. Parent-clinicians in the language training of an autistic child. Journal of Speech and Hearing Disorders, 1971, 36, 552-560.

Halle, J.W., Baer, D.M., & Spradlin, J.E. Teachers' generalized use of delay as a stimulus control procedure to increase language use in handicapped children. Journal of Applied Behavior Analysis, 1981, 14, 389-409.

Halle, J.W., Marshall, A.M., & Spradlin, J.E. Time delay: A technique to increase language use and facilitate generalization in retarded children. Journal of Applied Behavior Analysis, 1979, 12, 431-439.

Hart, B., & Risley, T.R. Establishing use of descriptive adjectives in the spontaneous speech of disadvantaged preschool children. Journal of Applied Behavior Analysis, 1968, 1, 109-120.

Hart, B., & Risley, T.R. Using preschool materials to modify the language of disadvanged children. Journal of Applied Behavior Analysis, 1974, 7, 243-256.

Hart, B., & Risley, T.R. Incidental teaching of language in the preschool. Journal of Applied Behavior Analysis, 1975, 8, 411-420.

Hart, B., & Risley, T.R. In vivo language intervention: Unanticipated general effects. Journal of Applied Behavior Analysis, 1980, 13, 407-432.

Howlin, P.A. The effectiveness of operant language training with autistic children. Journal of Autism and Developmental Disorders, 1981, 11, 89-105.

MacDonald, J.D., Blott, J.P., Gordon, K., Spiegel, B. & Hartmann, M. An experimental parent-assisted program for preschool language-delayed children. Journal of Speech and Hearing Disorders, 1974, 39, 395-415.

Nordquist, N.W., & Wahler, R.G. Naturalistic treatment of an autistic child. Journal of Applied Behavior Analysis, 1973, 6, 79-87.

Rogers-Warren, A., & Warren, S.F. Mands for verbalization: Facilitating the display of newly trained language in children. Behavior Modification, 1980, 4, 361-182.

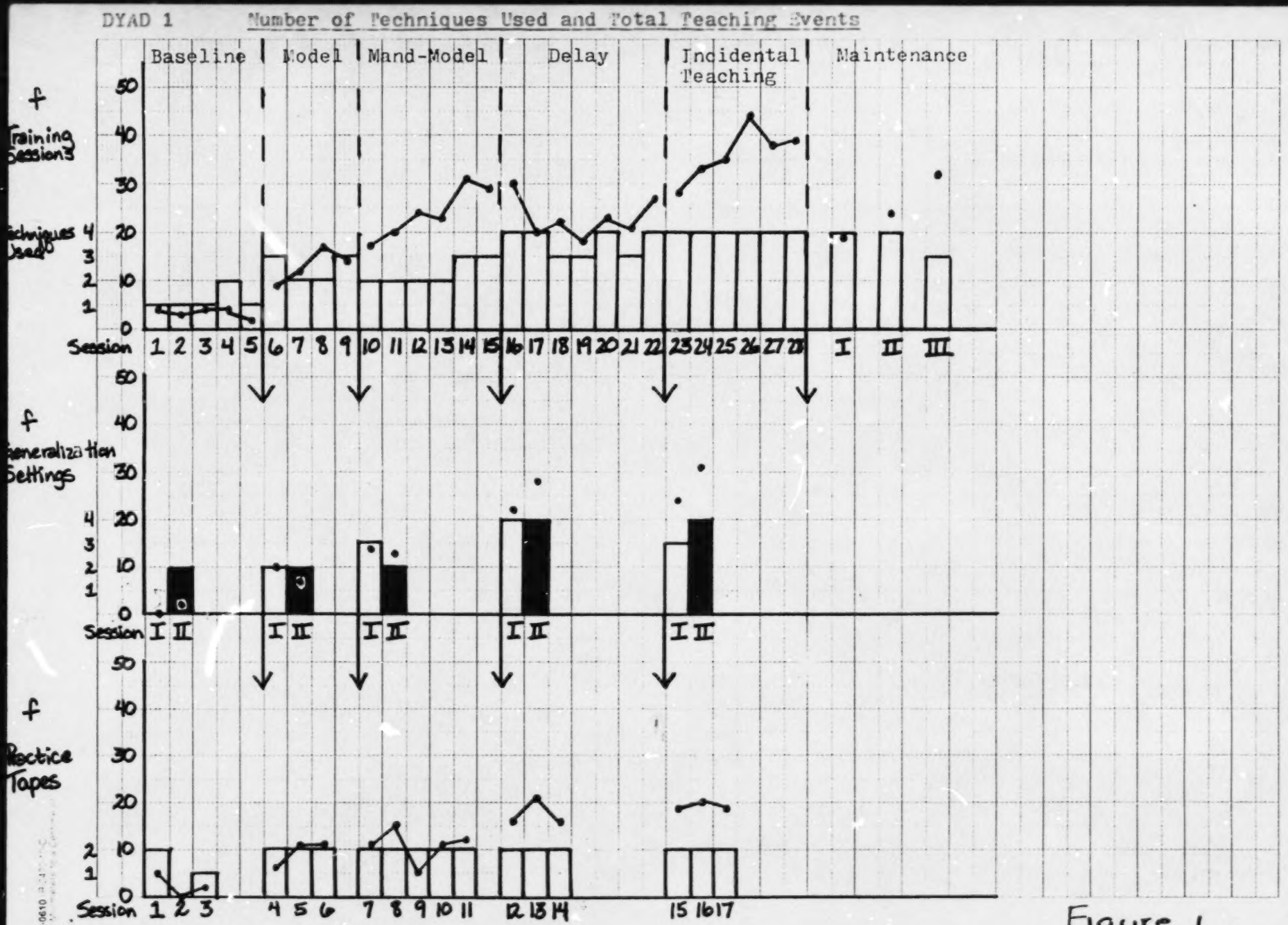

Figure 1

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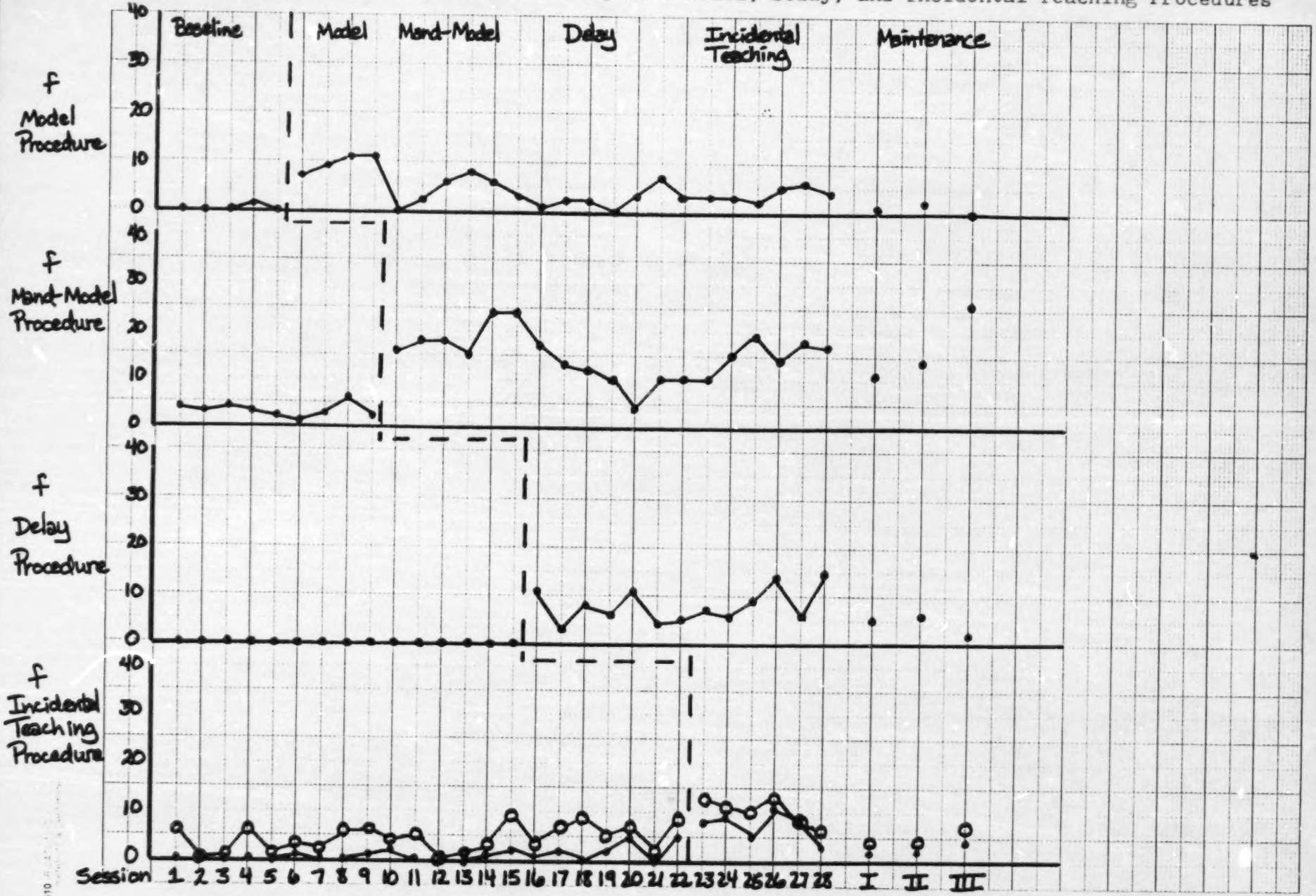
DYAD 1 Frequency of Correct Use of Model, Mand-Model, Delay, and Incidental Teaching Procedures



°Total number of verbal plus nonverbal requests per session.

Figure 2

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DYAD 1 Percentage Correct Use of Model, Mand-Model, Delay, and Incidental Teaching Procedures

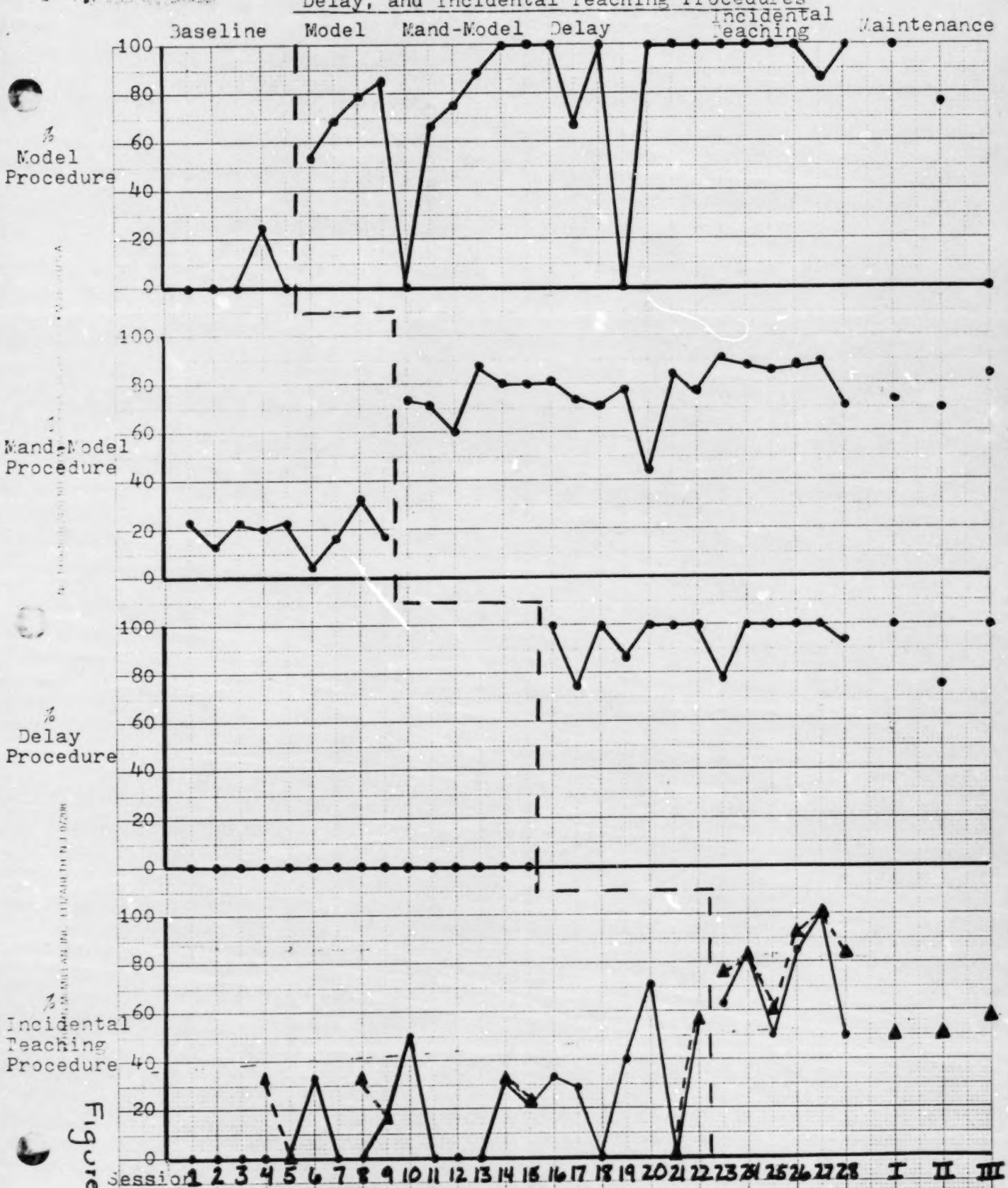

Figure 3

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DYAD 1 Frequency and Percentage Correct Use of Model and Mand-Model Procedures in Practice Sessions

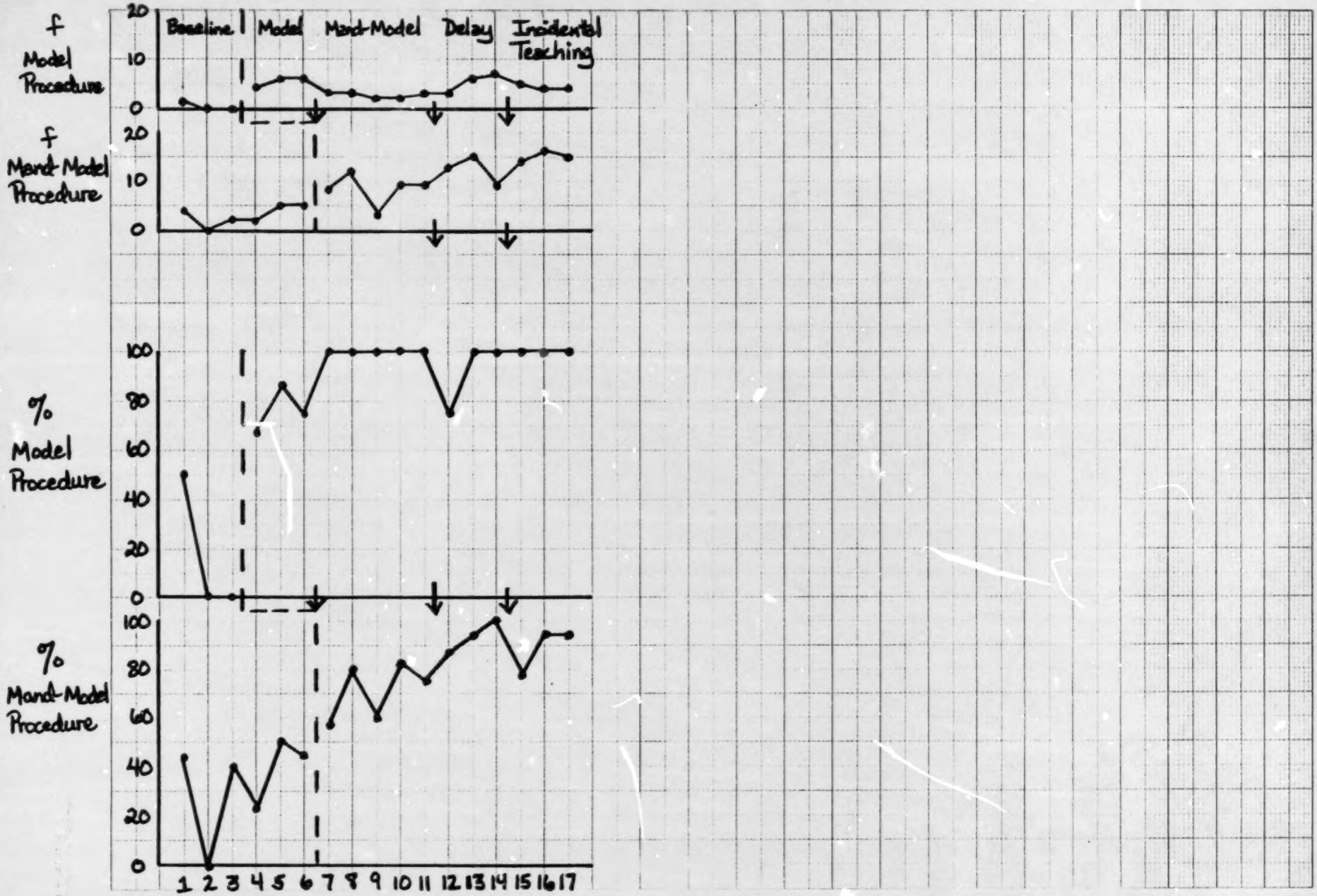

Figure 4

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DYAD 1

Unintelligible Responses by Child

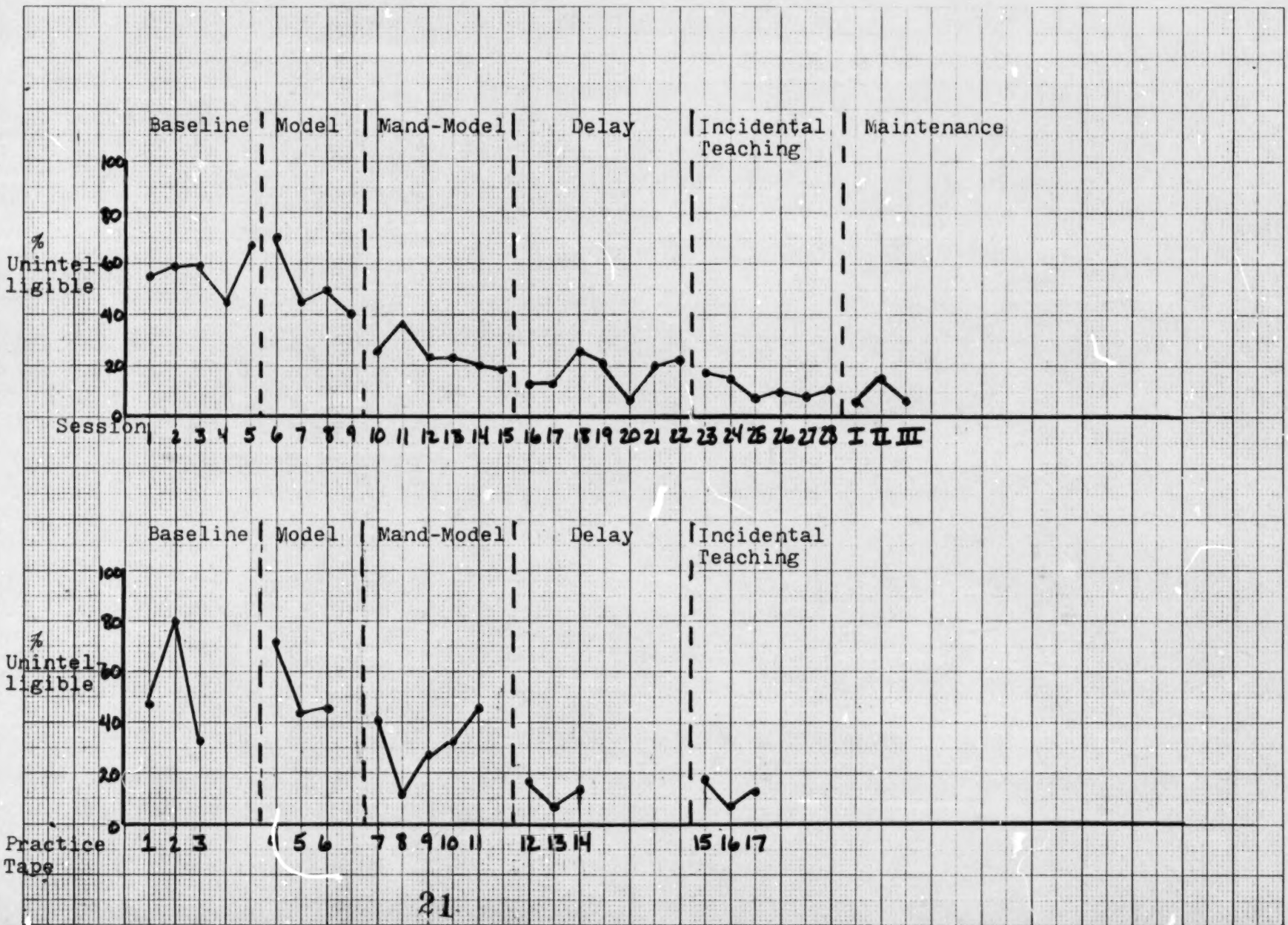

Figure 5